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09/859,570	05/16/2001	David Chalmers Schie	023P2328	4094
23504	7590	10/08/2003	EXAMINER	
WEISS & MOY PC 4204 NORTH BROWN AVENUE SCOTTSDALE, AZ 85251			VY, HUNG T	
			ART UNIT	PAPER NUMBER
			2828	

DATE MAILED: 10/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/859,570

Applicant(s)

SCHIE, DAVID CHAIMERS

Examiner

Hung T Vy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on amendment filed on 08/11/2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 9-12, 17-20, 23-30 and 37-50 is/are rejected.
- 7) ☒ Claim(s) 78, 13-16, 21-22, 31-32, and 35-36 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. In response to the amendment filed on 08/11/2003, claims 1-50 are pending in this application.

### Drawings

2. The drawings 1-6 are objected to by the PTO Draftsperson for the reasons noted on the attached Notice of Draftsperson's Patent Drawings Review, form PTO-948.

### Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-11, 20 and 28 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 9, 10 and 28 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. For example, the language of "output **capacitively** coupled to said laser diode"(emphasis added). The claim language is functional. It is not clear as how/where the output is capacitively coupled to the laser diode. The claim omits structural cooperative relationships. The claim's language does not read on fig. 2. The

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Fig. 2 shows that the output capacitively coupled to the bias circuit before coupled to laser diode. The claim does not support by the figure because no capacity couples to the laser diode (fig. 2).

Regarding claim 20, the phrase "a programmable current source" renders claim renders the claim indefinite because it is not clear what is considered as a programmable current source.

Regarding claims 37,45-46 the phrase "bias circuit having power supply input coupled to a power supply rail; a voltage reference coupled to said power supply rail for biasing a monitor diode optically coupled to said laser diode" renders the claims indefinite because the claims cannot be read on any figures of invention. For example, nowhere in figures of invention show that a voltage reference coupled to said power supply rail for biasing a monitor diode optically **coupled** to said laser diode. The claims are contradiction with figures and the claims do not make sense. Where is power supply rail? Further, the figures of the invention do not show a bias circuit having power supply input coupled to a power supply rail. Claims 37, and 45-46 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: nowhere in figure shows that a voltage reference coupled to said power supply rail for biasing a monitor diode optically **coupled** to said laser diode.

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Claims 2-8,11, 38-44, 47-50 depend from rejected claims 1 and 9 thereby render these dependent claims indefinite.

### **Claim Rejections - 35 USC § 102**

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

35 U.S.C. § 102(e), as revised by the AIPA and H.R. 2215, applies to all qualifying references, except when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. For such patents, the prior art date is determined under 35 U.S.C. § 102(e) as it existed prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. § 102(e)).

Claims 12, 17-20, 23-27, 29-30,33-34, 40, and 42-50 are rejected under 35 U. S. C. § 102 (b) as being anticipated by Taguchi et al., U.S. patent No. 6,345,062.

Regarding claims 12, 23-27, 29-30,33-34, and 37-50, Taguchi at al. discloses a circuit for controlling a laser diode (150), comprising: a bias circuit (110 or 208) coupled to said laser diode (140) for setting a DC operating point of said laser diode; an amplifier (105 or 205) having an output coupled to said laser diode (140 or 320) for

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superimposing an AC signal on said DC operating point, wherein said amplifier has a control input for controlling a maximum output swing of said amplifier (See column 13, line 66-67 and line 14, line 1-6); a control circuit (402 and 405) coupled to said control input for setting said maximum output swing; circuit have an adjustable response whereby a transition time of said AC signal may be adjusted ( Pulse generate 211), it is inherent that Taguchi et al. discloses a programmable memory coupled to said control circuit for storing values for controlling said maximum output swing because Taguchi et al. discloses a data bus and address bus (See fig. 11). The integrated circuit, further comprising: a control circuit (402 and 405) coupled to a third one electrical connections for coupling an output of an external modulation amplifier for supplying an AC modulating signal to said laser diode (140 or 320) through a fourth one of said electrical connections, said control circuit having an adjustable response whereby a transition time of said AC signal may be adjusted (See column 7, line 46-60 and fig. 3); a bias circuit (110) coupled to said laser diode (150) for setting DC operating point of said laser diode (150), said bias circuit having a power supply input coupled to a power supply rail; a voltage reference coupled to said power supply rail for biasing a monitor diode optically coupled to said laser diode (See fig. 9).

Regarding claim 17-20, Taguchi et al. discloses second amplifier (106) (See fig. 1-10).

With respect to claims 10, 11, and 24 -27, the methods of operating a laser are considered as product by process steps.

### **Allowable Subject Matter**

5. Claims 7-8, 13-16, 21-22, 31-32, 35-36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, since the prior art of record and considered pertinent to the applicant's disclosure does not teach or suggest the claimed limitations. Urakami et al., taken individually or in combination, do not teach the claimed invention having **a digitally programmable current source** comprises: a plurality of current sources, a plurality of switches, a shift register and having **programmable capacitor array** comprises: a plurality of capacitors, a plurality of switches and shift register.

Claims 1-6, 9-10, and 28 would be allowed. (if rewritten to overcome the rejection under 35 USC § 112 and to include all of the limitations of the base claim and any intervening claims)

### **Response to Arguments**

6. Applicant's arguments filed on 07/27/2003 have been fully considered but they are not persuasive. Applicant made the following arguments:

- a. "Taguchi does not teach a controllable and capacitively coupled amplifier for providing the AC signal to the laser diode, nor does Taguchi teach

independent control of the AC modulation for the bias control”, “the actual embodiments of Taguchi teach away from the use of an amplifier having a control input for controlling the maximum signal swing of the modulation, as in the embodiments of Figures 4-7 there is no control input on the amplifiers” page 26 second full paragraph.

b. “Taguchi teaches direct connection of the monitor diode to the power supply rail. There should be no confusion as between a power supply rail and the voltage reference of the above listed claims, as the power supply rail is included therein as a separate element of the claims ” page 29 first full paragraph.

In response to Applicant’s argument **a** above, the applicant’s argument is not persuasive because only claims 1, 9,10 and 28 recite the capacitor but all of the claims are rejected under the second paragraph of 35 U.S.C. 112 (see above)(those claims would be allowed if rewritten to overcome the rejection under 35 USC § 112 and to include all of the limitations of the base claim and any intervening claims). Taguchi teaches independent control of the AC modulation for the bias control as fig. 12, an amplifier having a control input for controlling the maximum signal swing of the modulation and there is control (405 and 402) input on the amplifiers. Further, in claim 12, the phrase “a control circuit for coupling said output of said amplifier to said laser diode” is contradiction with the figures of invention and applicant’s argument. The claim recites no a control circuit for coupling said **input** of said amplifier to said laser diode. The claim does not read on any figures of the invention.



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In response to Applicant's argument **b** above, the applicant's argument is not persuasive because the claims are confusing, vague and indefinite as rejection of the second paragraph of 35 U.S.C. 112 above. Where is power supply rail?

### Conclusion

8. When responding to the office action, Applicants are advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist the examiner to locate the appropriate paragraphs.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung VY whose telephone number is (703) 605-0759.

The examiner can normally be reached on Monday-Friday 8:30 am - 5:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul IP can be reached on (703) 308-3098. The fax numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

10. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

*Paul IP*  
*SPB2828*

Hung T. Vy  
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September 30, 2003